

## CLAIMS

What is claimed is:

- 1    1.     A method of reducing noise in a multi-stage power amplifier, comprising:  
2     providing a first power amplifier stage having an inductance coupled to a first switching  
3         device;  
4     coupling a second power amplifier stage to the first power amplifier stage, wherein the  
5         second power amplifier stage has an inductance coupled to a second switching  
6         device; and  
7     providing a feedback path from the second power amplifier stage to the first power  
8         amplifier stage to force the DC levels of the first and second power amplifier  
9         stages to be approximately equal.
- 1    2.     The method of claim 1, wherein the feedback path is provided by an inductor.
- 1    3.     The method of claim 1, wherein the feedback path is provided by two inductors.
- 1    4.     The method of claim 1, wherein the feedback path is provided by coupling an  
2     inductor to each of the inductances of the first and second power amplifier stages.
- 1    5.     The method of claim 1, wherein the feedback path is provided by an amplifier.
- 1    6.     The method of claim 5, wherein the amplifier comprises an op-amp.

- 1 7. The method of claim 5, wherein the amplifier is coupled to each of the  
2 inductances of the first and second power amplifier stages.
- 1 8. The method of claim 1, wherein the feedback path is provided by a resistance.
- 1 9. The method of claim 1, wherein the feedback path is provided by a resistor.
- 1 10. A method of reducing noise in a multi-stage power amplifier, comprising:  
2 providing a first power amplifier stage having an inductance coupled between first and  
3 second switching devices;  
4 providing a second power amplifier stage having an inductance coupled between third  
5 and fourth switching devices; and  
6 forming a feedback path from the second power amplifier stage to the first power  
7 amplifier stage to force the DC levels of the first and second power amplifier  
8 stages to be approximately equal.
- 1 11. The method of claim 10, wherein the feedback path is provided by an inductor.
- 1 12. The method of claim 10, wherein the feedback path is formed by coupling an  
2 inductor to each of the inductances.
- 1 13. The method of claim 10, wherein the feedback path is provided by an amplifier.
- 1 14. The method of claim 13, wherein the amplifier comprises an an op-amp.

1 15. The method of claim 10, wherein the feedback path is provided by a resistance.

1 16. The method of claim 10, wherein the feedback path is provided by a resistor.

1 17. A multi-stage power amplifier comprising:

2 a first power amplifier stage having an inductance coupled to a first switching device;

3 a second power amplifier stage having an inductance coupled to a second switching

4 device; and

5 a feedback path coupled between the second and first power amplifier stages so as to

6 make the DC levels of the first and second power amplifier stages to be

7 approximately equal.

1 18. The multi-stage power amplifier of claim 17, wherein the feedback path is formed

2 by coupling an inductor to each of the inductances.

1 19. The multi-stage power amplifier of claim 17, wherein the feedback path is formed

2 by coupling an amplifier between the second and first power amplifier stages.

1 20. The multi-stage power amplifier of claim 17, wherein the feedback path is formed

2 by coupling an op-amp between the second and first power amplifier stages.

1 21. The multi-stage power amplifier of claim 17, wherein the feedback path is

2 provided by a resistance.

1 22. The multi-stage power amplifier of claim 17, wherein the feedback path is  
2 provided by a resistor coupled between the second and first power amplifier stages.

1 23. A method of reducing noise in a power amplifier, comprising:  
2 providing a power amplifier having one or more inputs and one or more outputs, and  
3 having an inductance coupled between first and second switching devices; and  
4 coupling a feedback path between one of the inputs and one of the outputs of the power  
5 amplifier.

1 24. The method of claim 23, wherein the feedback path is formed by a resistance  
2 coupled between the one of the inputs and one of the outputs of the power amplifier.

1 25. The method of claim 24, wherein the resistance is coupled between the gate of the  
2 first switching device and the drain of the second switching device.

1 26. The method of claim 25, further comprising coupling a second resistance  
2 between the input and the output of the power amplifier.

1 27. The method of claim 26, wherein the second resistance is coupled between the  
2 gate of the second switching device and the drain of the first switching device.

1 28. The method of claim 23, wherein the resistance is provided by a resistor.

1 29. The method of claim 23, wherein the feedback path is formed by an inductance  
2 coupled between the one of the inputs and one of the outputs of the power amplifier.

1 30. A power amplifier having an input and an output comprising:  
2 a first switching device coupled to a first voltage supply node;  
3 a second switching device coupled to a second voltage supply node;  
4 an inductance coupled to between the first and second switching devices; and  
5 a feedback path coupled between the input and the output of the power amplifier.

1 31. The power amplifier of claim 30, wherein the feedback path comprises a resistor  
2 coupled between the input and the output of the power amplifier.

1 32. The power amplifier of claim 31, wherein the resistor is coupled between the gate  
2 of the first switching device and the drain of the second switching device.

1 33. The power amplifier of claim 32, further comprising a second resistor coupled  
2 between the input and the output of the power amplifier.

1 34. The power amplifier of claim 33, wherein the second resistor is coupled between  
2 the gate of the second switching device and the drain of the first switching device.

1 35. The power amplifier of claim 30, wherein the feedback path comprises an  
2 inductance coupled between the input and the output of the power amplifier.

1 36. A method of reducing noise in a multi-stage power amplifier, comprising:  
2 providing a power amplifier stage having an inductance coupled to a first switching  
3 device; and  
4 providing a feedback path from the output of the power amplifier stage to the input of the  
5 power amplifier stage to force the DC levels at the input and output of the power  
6 amplifier stage to be approximately equal.

1 37. The method of claim 36, wherein the feedback path is provided by an inductor.

1 38. The method of claim 36, wherein the feedback path is provided by a resistor.

1 39. The method of claim 36, wherein the feedback path is provided by an amplifier.

1 40. The method of claim 39, wherein the amplifier comprises an op-amp.